

Claims

1. A method for operating a loom, having a first drive motor which drives a first element, such as a batten, and at least a second drive motor which drives a second element, such as a shedding mechanism, characterized in that a rotational angle course for a virtual synchronization shaft of the loom is formed; and that the elements driven by the drive motors are each synchronized, in at least one predetermined rotational angle position, with the virtual synchronization shaft.

2. The method according to claim 1, characterized in that the drive motors (10, 15; 10, 44) are operated as a function of the rotational angle course of the virtual synchronization shaft.

3. The method according to claim 1 or 2, characterized in that the rotary motion of at least one of the drive motors (10, 15; 10, 44) is regulated; and that the regulation is based on desired values, which are derived from the rotational angle course of the virtual synchronization shaft.

4. The method according to one of claims 1 through 3, characterized in that the rotary motion of at least one of the drive motors (10, 15; 10, 44) is controlled in accordance with a program.

5. The method according to one of claims 1 through 4, characterized in that the angular positions of the virtual synchronization shaft with which the drive motors (10, 15; 10, 44) are synchronized are adjustable.

6. A loom having a first drive motor which drives a first element, such as a batten, and at least a second drive motor which drives a second element, such as a shedding mechanism, characterized in that a control and regulating device (48) is provided, which forms a rotational angle course for a virtual synchronization shaft of the loom and communicate to respective control and regulating units (49, 51) of each of the drive motors (10, 15; 10, 44), which synchronize each of the elements driven by the drive motors, in at

least one predetermined rotational angle position, with the virtual synchronization shaft.

7. The loom according to claim 6, characterized in that the control and regulating unit (49, 51, 50) of at least one of the drive motors (10, 15; 10, 44) regulates the rotary motion of this drive motor in accordance with desired values that are derived from the rotational angle course of the virtual synchronization shaft.

8. The loom according to claim 6 or 7, characterized in that the control and regulating unit (49, 51) of at least one of the drive motors (10, 15; 10, 44) includes a program controller.

9. The loom according to one of claims 6 through 8, characterized in that the control and regulating units (49, 51) of the drive motors (10, 15; 10, 44) are assigned input devices (53, 54), by means of which data can be input, on the basis of which data the angular positions to be synchronized with the virtual synchronization shaft are adjustable.

10. The loom according to one of claims 6 through 9, characterized in that for the shedding means, a separate drive motor (15, 44) for each is provided, which is independent of a main drive motor (10) that drives the batten (13).

11. The loom according to claim 10, characterized in that the drive motor (15) of the shedding means is mounted on a frame (25, 26) of the loom and is connected to the shedding means via a resilient coupling element (18).

12. The loom according to claim 10 or 11, characterized in that at least one gear stage (11, 16, 45) each is provided between the batten (13) and the main drive motor (10) and between the drive elements (14, 37) of the shedding means and their drive motor (15, 44).

13. The loom according to one of claims 10 through 12, characterized in that the gear train (11) belonging to the main drive motor (10) and the gear

train (16) belonging to the drive motor (15) of the shedding means are located in a common gearbox (25), which is preferably integrated with a frame of the loom.

14. The loom according to one of claims 10 through 12, characterized in that the gear train (11) of the main drive motor (10) and the gear train (16) of the drive motor (15) of the shedding means are accommodated in chambers (26, 27) separate from one another in the common gearbox.

15. The loom according to claim 10 or 12, characterized in that the drive motor (15, 44) of the shedding means is secured to a housing that contains drive elements for the shedding means.

16. The loom according to claim 15, characterized in that the drive motor (15) of the shedding means is secured to a gearbox (33) which in turn is secured to the housing of the drive elements.

17. The loom according to claim 15, characterized in that the drive motor (15) is mounted directly on the housing of the drive elements of the shedding means.

18. The loom according to one of claims 6 through 17, characterized in that the main drive motor (10) and/or the batten (13) as well as the drive motor (15, 44) and/or the drive elements and/or the shedding means are assigned sensors (23, 24, 28, 31, 50, 52, 56, 57, 59), which detect the angular position of the respective component.

19. The loom according to one of claims 1 through 9, characterized in that the main drive motor (10) and/or the drive motor (15, 44) of the shedding means are assigned switchable brakes (22, 29, 30).